ABSTRACT

In invertebrates, Fhit is encoded as a fusion protein with Nit. Outside of invertebrates, Nit homologs are found as separate polypeptides in organisms with Fhit homologs. Therefore, Nit and Fhit are expected to interact physically and function in the same cellular pathway. The structure of the NitFhit fusion protein and interactions between the Nit and Fhit polypeptides are defined. The present invention relates to the identification of small molecules that interact with, and regulate, the Nit protein. The present invention further relates to therapeutic compositions and their uses in regulating Nit activity, thereby modulating cellular proliferation.